

- (2) organic acids or derivatives thereof,
- (3) lipids or derivatives thereof,
- (4) alcohols or derivatives thereof,
- (5) amines or derivatives thereof,
- (6) amino acids or derivatives thereof,
- (7) proteins or derivatives thereof,
- (8) nucleic acids or derivatives thereof,
- (9) natural extracts,
- (10) fermentation residues, and
- (11) vitamins,

wherein said agent shows not less than a 5% improved reproduction degree of unicellular green cells within 15 days after an effective concentration of the plant activator has been given to a plant, wherein said improved reproduction degree is calculated by the following formula:

$$\begin{aligned} &\text{Improved reproduction degree in unicellular green cells (\%)} \\ &= [(P_1 - P_0) / P_0] \times 100 \end{aligned}$$

wherein P_0 represents the reproduction amount of unicellular green cells when the plant-activating agent is not used, and P_1 represents the reproduction amount of unicellular green cells when the plant-activating agent is used.

9. (Amended) The plant-activating agent as claimed in the claim 8, satisfying at least one of the following (a), (b), (c), (d) and (e):

- (a) an improved degree of SPAD chlorophyll value of said plant of not less than two points,
- (b) an increase in the weight of said plant of not less than 10%, wherein the weight of said plant is either a fresh weight or a dry weight,
- (c) an improved degree of leaf-area of said plant of not less than 5%,
- (d) an increase in the concentration amount of ascorbic acid in a blade part of said plant of not less than 5%, and
- (e) a decrease in the concentration amount of nitrate ion in a blade part of said plant of not less than 10%.

10. (Amended) The plant-activating agent of claim 8 or claim 9, wherein said unicellular green cells are chlorella and said substance has not less than a standard improved reproduction degree of 5% in reproduction of said chlorella.

15. (Amended) A method for assisting growth of a plant comprising the step of:

applying to said plant an effective amount of the plant-activating agent of claim 9.

16. (Amended) A method for assisting growth of a plant comprising the step of:

applying to said plant an effective amount of the plant-activating agent of claim 10.

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Cont 17. (Amended) A method for assisting growth of a plant comprising the step of:

applying to said plant an effective amount of the plant-activating agent of claim 11.

18. (Amended) A method for assisting growth of a plant comprising the step of:

applying to said plant an effective amount of the plant-activating agent of claim 12.

Please add the following new claims 23 to 37: ✓

Bz -- 23. A plant-activating agent comprising an effective amount of a substance selected from the group consisting of:

(12) fatty acids or derivatives thereof,


- (13) organic acids or derivatives thereof,
- (14) lipids or derivatives thereof,
- (15) alcohols or derivatives thereof,
- (16) amines or derivatives thereof,
- (17) amino acids or derivatives thereof,
- (18) proteins or derivatives thereof,
- (19) nucleic acids or derivatives thereof,
- (20) natural extracts,
- (21) fermentation residues, and
- (22) vitamins,

B3 wherein said agent shows not less than a 5% improved reproduction degree of a callus of green cells within 15 days after an effective concentration of the plant activator has been given to a plant, wherein said improved reproduction degree is calculated by the following formula:

$$\begin{aligned} &\text{Improved reproduction degree in a callus of green cells (\%)} \\ &= [(P_1 - P_0) / P_0] \times 100 \end{aligned}$$

wherein P_0 represents the reproduction amount of a callus of green cells when the plant-activating agent is not used, and P_1 represents the reproduction amount of a callus of green cells when the plant-activating agent is used.

24. The plant-activating agent as claimed in the claim 23, satisfying at least one of the following (a), (b), (c), (d) and (e):


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- (a) an improved degree of SPAD chlorophyll value of said plant of not less than two points,
 - (b) an increase in the weight of said plant of not less than 10%, wherein the weight of said plant is either a fresh weight or a dry weight,
 - (c) an improved degree of leaf-area of said plant of not less than 5%,
 - (d) an increase in the concentration amount of ascorbic acid in a blade part of said plant of not less than 5%, and
 - (f) a decrease in the concentration amount of nitrate ion in a blade part of said plant of not less than 10%.

25. The plant-activating agent of claim 23 or claim 24, wherein said callus of green cells is a liverwort callus and said substance has not less than a standard improved reproduction degree of 5% in reproduction of said liverwort callus.

26. The plant-activating agent of claim 23 or claim 24, wherein said agent is given in the form of an aqueous solution or an aqueous dispersion in an amount of 0.01 to 5000 ppm in terms of

an effective or active component per a culturing solution of said callus of green cells.

27. The plant-activating agent of claim 23 or claim 24, wherein said agent is given by spraying in the form of a solid agent that is in a granular form, a dust formulation, an aqueous solution or an aqueous dispersion of the plant-activating agent, and is given as an active component in a proportion of 0.001 to 3000 kg per 1000 m².

 28. The plant-activating agent of claim 23 or 24, further comprising a surfactant or a chelating agent.

29. A method for assisting the growth of a plant, comprising the step of:

applying to said plant an effective amount of the plant-activating agent of claim 23.

30. A method for assisting growth of a plant comprising the step of:

applying to said plant an effective amount of the plant-activating agent of claim 24.

31. A method for assisting growth of a plant comprising the step of:

applying to said plant an effective amount of the plant-activating agent of claim 25.

32. A method for assisting growth of a plant comprising the step of:

applying to said plant an effective amount of the plant-activating agent of claim 26.

33. A method for assisting growth of a plant comprising the step of:

B3 applying to said plant an effective amount of the plant-activating agent of claim 27.

34. The method for assisting growth of a plant according to claim 29 or 30, wherein said method comprises the step of giving said effective amount of the plant-activating agent directly as a solid fertilizer in the form of a dust formulation or a granule formulation.

35. The method for assisting growth of a plant according to claim 29 or 30, wherein said method comprises the step of spraying a diluted aqueous solution containing said effective amount of the

plant-activating agent directly on phylloplanes, stems or fruits of said plant.

36. The method for assisting growth of a plant according to claim 29 or 30, wherein said method comprises the step of injecting a diluted aqueous solution containing said effective amount of the plant-activating agent into soil.

B3 37. The method for assisting growth of a plant according to claim 29 or 30, wherein said method comprises the step of contacting the roots to said plant with water that includes therein a diluted and mixed aqueous liquid for hydroponics that contains said effective amount of the plant-activating agent. --
